

Researches of fractional composition of protein of Amaranth

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Abstract

It is widely known that Amaranth is a highly nutritious plant, and contains all the essential amino acids. It provides an amazing amount of magnesium, calcium and dietary fiber for general health. The literature provides that there are numerous citations about the quality and composition of amaranth seeds, but not much information about amaranth protein in the green mass. Furthermore, amaranth's green mass has a fast and high yield, making it a great source of protein. For this reason, the protein amount, as well as fractional composition in different kind of amaranth, was investigated. It was revealed that amaranth differs in its content of protein, with its maximal accumulation in the blossoming phase (17.2-32.6% from dry weight for various samples), within various species. It was confirmed that in the ontogenesis of amaranth, the share of albumins and globulins is reduced while the share of glutelins and gliadins is increased. A low content of reserved proteins in the seeds of amaranth (42% from the sum of protein) in comparison with wheat and other cereals has been observed. © 2008 Bentham Science Publishers Ltd.

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Keywords

Amaranth, Chlorophyll, Protein, Protein fractions